## (19) World Intellectual Property Organization International Bureau

# CHPO OHP!

## 

### (43) International Publication Date 14 April 2005 (14.04.2005)

# (10) International Publication Number WO 2005/033802 A3

(51) International Patent Classification:

**H01J 61/34** (2006.01) **H01J 61/36** (2006.01) **H01J 61/82** (2006.01) **H01J 5/54** (2006.01)

(21) International Application Number:

PCT/IB2004/051938

English

(22) International Filing Date: 1 October 2004 (01.10.2004)

(25) Filing Language: Engli

(26) Publication Language:

(30) Priority Data: 03103674.2 3 October 2003 (03.10.2003)

(71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

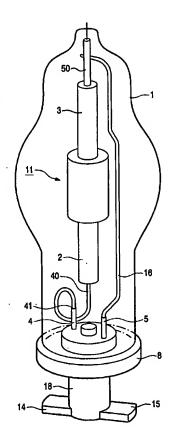
(75) Inventors/Applicants (for US only): DEKKERS, Guy, J., M. [BE/BE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). ONNEKES-VAN DER VOORT, Elisabeth [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (74) Agent: DUSSELDORP, Jan, C.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: DISCHARGE LAMP



(57) Abstract: The invention relates a high-pressure discharge lamp, which comprises: an outer bulb (1) in which a discharge vessel (11) is arranged around a longitudinal axis (22), the discharge vessel enclosing, in a gastight manner, a discharge space (13) provided with an ionizable filling, the discharge vessel having a first (2) and a second (3) mutually opposed portion forming a first and a second leadthrough through which a first (40) and a second (50) leadthrough conductor, respectively, extend to a pair of electrodes (6,7) arranged in the discharge space, a lamp base (8) of electrically insulating material supporting the discharge vessel via a first (4) and a second (5) current supply conductor, each having a weld with the respective first and second leadthrough conductor, forming a first and a second current path to the pair of electrodes, the lamp base also supporting the outer bulb, the outer bulb enclosing the first and second current supply conductors, the outer bulb being connected to the lamp base in a gas-tight manner, the lamp base being provided with first (14) and second (15) contact members connected electrically to the respective first and second current supply conductor.



#### Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

#### Published:

- with international search report
- (88) Date of publication of the international search report: 25 January 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## INTERNATIONAL SEARCH REPORT

International Application No PCT/IB2004/051938

A. CLASSI	FICATION OF SUBJECT MATTER H01J61/34 H01J61/82 H01J61	/36 H01J5/54							
1144.	1101001, 04	110200, 0 1							
According to International Patent Classification (IPC) or to both national classification and IPC									
B. FIELDS	SEARCHED		_						
Minimum documentation searched (classification system followed by classification symbols)									
H01J	HO1K	•	!						
Documenta	Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched								
	Cocambination searched units than minimum accombination to the octobe that cocambination of the search accombination of the search accombinati								
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)									
EPO-In	ternal								
			·						
C. DOCUMENTS CONSIDERED TO BE RELEVANT									
Category •	Citation of document, with indication, where appropriate, of the	relevant passages	Relevant to claim No.						
χ	GB 476 836 A (PATENT TREUHAND	•	1,2						
	GESELLESCHAFT)								
Y	16 December 1937 (1937-12-16)		3-9						
	the whole document	•							
Α	US 4 758 759 A (SCHOLZ JOHN A [	US] ET AL)	1,2						
Y	19 July 1988 (1988-07-19)		3–9						
l '	abstract		3-9						
	column 3, line 25 - column 4, l figures 1-3	ine 26							
Y	EP 0 429 256 A (GEN ELECTRIC [U	<b>S1</b> )	1-9						
Ċ	29 May 1991 (1991-05-29)								
1	abstract   page 3, line 5 - page 4, line 3								
1	figure 1								
	<del></del>	-/							
		<u> </u>							
X Further documents are listed in the continuation of box C. X Patent family members are listed in annex.									
	stegories of cited documents;	"T" later document published after the inte or priority date and not in conflict with	the application but						
consid	ent defining the general state of the art which is not dered to be of particular netwance	cited to understand the principle or th invention	eory underlying the						
filing o	*E* earlier document but published on or after the International "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to								
which	'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "V" document of particular relevance; the claimed invention countries to a priority at payment to provide a priority at payment to								
O, docum	'O' document referring to an oral disclosure, use, exhibition or document is combined with one or more other such document other means combined with one or more other such document is combined with one or more other such document is combined to being obvious to a person skilled								
'P' docum tater ti	ent published prior to the international filing date but han the priority date claimed	in the art.  '&' document member of the same patent							
Date of the	Date of the actual completion of the international search  Date of mailing of the international search report								
2	8 September 2006	26/10/2006							
Name and malling address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2									
	NL - 2280 HV RIJSWIJK Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (-31-70) 340-3016	Gijsbertsen, Hans	<b>;</b>						

## INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/051938

		PCT/18200	4/051938
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with Indication, where appropriate, of the relevant passages		Relevant to claim No.
Υ .	US 5 113 330 A (MAKITA HIROYUKI [JP]) 12 May 1992 (1992-05-12) abstract column 4, line 3 - column 5, line 6 figures 1,3		1-9
E	WO 2004/107390 A (KONINKLIJKE PHILIPS ELECTRONICS N.V; MARIEN, LEO, G., J., E; CARUSO, N) 9 December 2004 (2004-12-09) abstract page 5, line 25 - page 7, line 6 figures 1-4		1,2
A	US 2002/047523 A1 (VAN DOMMELEN MARK JOSEPHUS LUC [BE] ET AL) 25 April 2002 (2002-04-25) the whole document		1,2
A	FR 2 703 826 A (PHILIPS ELECTRONICS NV [NL]) 14 October 1994 (1994-10-14) abstract page 3, lines 20-31 page 4, lines 18-26 figure 1		1,2
A	US 5 432 399 A (NAGASAWA MASAKAZU [JP] ET AL) 11 July 1995 (1995-07-11) figures 3,4		1
	,		
	·		
		•	
		·	
			·

## INTERNATIONAL SEARCH REPORT

Information on patent family methbers

International Application No PCT/IB2004/051938

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 476836 A	16-12-1937	NONE	
US 4758759 A	19-07-1988	NONE	
EP 0429256 A	29-05-1991	CA 2025245 A3 DE 69016942 D3 DE 69016942 T3 JP 2615258 B3 JP 3201359 A US 5019743 A	23-03-1995 2 12-10-1995
US 5113330 A	12-05-1992	DE 4116244 A JP 2691945 B JP 4026001 A	
WO 2004107390 A	09-12-2004	NONE	
US 2002047523 A1	25-04-2002	CN 1383576 A WO 0195368 A JP 2003536216 T	04-12-2002 1 13-12-2001 02-12-2003
FR 2703826 A	14-10-1994	DE 9313678 U	18-11-1993
US 5432399 A	11-07-1995	NONE	